



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,585	08/09/2001	Yasutaka Sato	062800-0103	2998
22428 7590 05/07/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER PYZOCHA, MICHAEL J	
			ART UNIT 2137	PAPER NUMBER
			MAIL DATE 05/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/924,585

Applicant(s)

SATO, YASUTAKA

Examiner

Michael Pyzocha

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,13,15-20,26,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,13,15-20,26,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2137

**DETAILED ACTION**

1. Claims 1-4, 7, 13, 15-20, 26, 35 and 36 are pending.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/27/2007 has been entered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 7, 13, 16, 17, 19, 26, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Karppanen (US 5987137).

Art Unit: 2137

As per claims 1, 13, and 17, Karppanen discloses a data protection processing device that encrypts a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers, the data protection processing device comprising: a determination unit that determines whether the first byte indicates a first value (see column 9 lines 53-62); a calculation unit that performs, using a second value, an arithmetic operation on the M second bytes when the determination unit determines that the first byte indicates the first value (see column 7 lines 16-19) and using the second value without performing the arithmetic operation on the N intermediate bytes (see column 11 lines 1-18, column 5 lines 7-9 and column 6 lines 18-22 which shows the header is not ciphered).

As per claims 3, 16, and 19, Karppanen discloses the first value, the second value, the M and the N are stored in the data protection processing device, and are able to be rewritten from the outside (see column 9 lines 53-62; column 7 lines 16-19; column 9 lines 11-19; and Figure 4b).

As per claims 7 and 26, Karppanen discloses a receiving unit that receives, from another data protection processing

Art Unit: 2137

device, another bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes (see column 9 lines 53-62; column 7 lines 16-19; column 9 lines 11-19; and Figure 4b); a second determination unit that determines whether the third byte indicates the first value (see column 9 lines 53-62; column 7 lines 16-19; column 9 lines 11-19; and Figure 4b); a second calculation unit that performs, using the second value, a second arithmetic operation on the M fourth bytes when the second determination unit determines that the third byte indicates the first value (see column 9 lines 53-62; column 7 lines 16-19; column 9 lines 11-19; and Figure 4b).

As per claims 35-36, Karppanen discloses when the first byte indicates the first value, the M second bytes correspond to an adding range, the first byte corresponds to an adding condition, and the second value corresponds to a protection key value (see column 9 lines 53-62; column 7 lines 16-19; column 9 lines 11-19; and Figure 4b).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2137

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karppanen, as applied to claims 1, 13, and 17 above in view of Iijima (US 4833595).

As per claims 2, 15, and 18, Karppanen fails to disclose the arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1.

However, Iijima teaches the setting of the most significant bits to 1 (see column 5 lines 8-12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to set all of the most significant bits of the data in the Karppanen system to 1.

Motivation to do so would have been to temporarily invalidate data (see Iijima column 5 lines 8-12).

The modified Karppanen and Iijima system fails to explicitly state that the setting of the MSB is done by addition or subtraction.

Art Unit: 2137

However, Official Notice is taken that at the time of the invention one of ordinary skill in the art would recognize addition and subtraction as methods to set the MSB to 1. Motivation to do so is that these are well-known binary operations used by processors.

6. Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karppanen, as applied to claims 1 and 17 above, in view of Sasaki (US 20020089987).

As per claims 4 and 20, Karppanen fails to explicitly disclose a first buffer that temporarily stores a plurality of bytes to be read out by the determination unit, the plurality of bytes being obtained from the bit stream by bit-to-byte conversion; a second buffer that temporarily stores the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the arithmetic operation.

However, Sasaki teaches the common and well-known idea of using buffers to temporarily store data (see paragraph 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Sasaki with those of Karppanen because doing so allows for data to be temporarily and efficiently stored using buffers.

***Response to Arguments***

Art Unit: 2137

7. Applicant's arguments filed 02/27/2007 have been fully considered but they are not persuasive. Karppanen fails to disclose performing the arithmetic operation on the M second bytes without performing it on the N intermediate bytes and that Simpson fails to disclose the limitations of claims 2, 15, and 18.

With respect to Applicant's argument that Karppanen fails to disclose performing the arithmetic operation on the M second bytes without performing it on the N intermediate bytes, Applicant is directed to column 5 lines 7-9 and column 6 lines 18-22, which shows the header is not ciphered. Applicant is further directed to figures 5 and 6, which show the format of the header. Specifically in figure 6 the header is made up of two bytes and contains, among other things, a bit (as part of the first byte) to determine whether encryption is used (see bit 7 and column 11 line 7). This first byte of the header is followed by a second byte (the N intermediate bytes where N is a positive integer) containing SDU number and since the header is not encrypted as disclosed in the cited portions of columns 5 and 6, Karppanen discloses performing the arithmetic operation on the M second bytes without performing it on the N intermediate bytes.



Art Unit: 2137

Applicant's argument with respect to Simpson is moot in view of the new rejection given above.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited on the PTO-892 form each relate to methods of encrypting information where a header is not encrypted and the data is encrypted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJP

  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER